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SPECIAL ARTICLES

Your Role and Responsibilities in the Manuscript Peer Review Process

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The strength and vitality of publications in our profession and pharmaceutical science disciplines are centered on the premise of a high-quality manuscript peer review process. Peer review is the essential element in promoting quality and excellence in the papers published in our scientific, educational, and professional journals. Peer review provides authors with the opportunity to improve the quality and clarity of their manuscripts. It also guides the journal's editorial staff in making publication decisions and identifying substandard manuscripts that should not be published. Individuals who participate in the peer review process provide a valuable service to their colleagues and the journal's editorial staff members by improving the literature in their discipline. Serving as a manuscript peer reviewer is an important, critical professional activity and responsibility.

New reviewers may not have been mentored by senior faculty members or gained experience by editing their colleagues' papers. In fact, when presented with the first opportunity to review a manuscript, most reviewers have neither received any instruction nor guidance in how to conduct a manuscript review nor is the process something that is easily mastered.[1] The goal of this communication is to provide suggestions how to improve the quality of the peer review process and assist new reviewers with insights and guidelines for conducting a comprehensive, impartial, and fair review. Useful alternative resources for the new reviewer include the works of Provenzale and Stanley[1] and Scheife and Cramer.[2]

SUGGESTIONS WHEN RECEIVING AN INVITATION

Editors select reviewers based on their knowledge of an individual's expertise and/or areas of interest that these individuals have indicated to the journal through the use of key words or terms. When a reviewer receives an invitation to review a manuscript, several preliminary decisions must be made before accepting the offer extended by the editor. Most importantly, does the reviewer have time to complete the review? A reviewer who is unable to complete the review within the suggested timeframe (usually 2 or 3 weeks) should decline the opportunity and suggest alternative reviewers, if possible. Next, does the reviewer have professional expertise in the manuscript subject area? A reviewer who does not have expertise in the given topic can assist the editor and be fair to the author(s) by declining to serve and suggesting alternative reviewers. Finally, does the reviewer have a conflict of interest with the author(s) involved in the work or the work itself? In other words, is some relationship or situation present that might positively or negatively bias the review? Often, the reviewer can make all of these decisions simply by reading the title of the manuscript, the authors' names and affiliations, and the abstract. If the reviewer is confident that he/she can commit to serve as a reviewer for this manuscript, the reviewer should notify the editor promptly to accept the assignment and then begin the review process.

SUGGESTIONS FOR THE REVIEW PROCESS

In most cases, writing a good review will require approximately 2-3 hours or more for an experienced scientist or professional. A useful approach to a review is to read and evaluate the manuscript employing 3 different perspectives. Initially, a reviewer should read the manuscript to gain an understanding of the content and focus of the work from the perspective of someone in the field. The originality and quality of the work are 2 important criteria to be assessed during this initial review. No reviewer is exhaustively versed in all topics within a given field. Thus, it may be useful and necessary to consult pertinent references cited in the manuscript or conduct a database

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search (eg, PubMed) in order to gain a better understanding of the topic or elements of the manuscript.

The review process is considered confidential. As such, it is not appropriate to share the manuscript with colleagues in order to understand the focus, methods, or outcomes of the research presented in the manuscript to complete the review. It is customary, however, to engage a colleague to jointly review a manuscript if this option is acceptable to the journal's editorial staff. The reviewer should discuss this issue with the editorial office. This process serves not only to enhance the overall quality of the review by expanding the breadth of expertise on a particular topic and also serves as an opportunity for junior faculty members, senior level graduate students, postdoctoral residents and postdoctoral fellows to experience the review process during their respective training experiences.

The second perspective focuses on reading the manuscript as a competitor, while maintaining a critical but objective and fair eye. This step of the review identifies the strengths of the submission or material discussed in the manuscript as well as areas needing improvement. Specific areas for evaluation include identification of errors within the study methods, and misinterpretation or over interpretation of study results.[2] Missing data (eg, such as that from a survey, tables, or figures) should be identified and requested from the author(s). Whenever possible, the reviewer should refer the authors to other publications that might assist them in improving the manuscript.[2] Thus, the focus of the reviewer is to evaluate the quality of the work presented in the manuscript and whether it provides a new or significant contribution to the literature. Does this work represent good science or an educational advancement and what will be the impact of this paper on the discipline?[2] Conceptually, one can approach answering these questions with 2 additional questions. In the first instance, pose the question, "If the rigor of this paper were perfect from either a scientific or educational perspective, what would be the scientific, clinical or educational impact of the findings?"[2] Then pose the question, "If the impact of the data were profound, what is the quality of the science or educational advancement (ie, scientific or educational rigor)?"[2] These 2 hypothetical questions can be immensely beneficial in assessing the merits of a research investigation, educational advancement, or case described within a manuscript under review. The reviewer should assess whether the author demonstrates an understanding of and cites the existing literature in this area and whether the conclusions are consistent with the data/findings and discussed in the context of what is already known in the area. This latter process can be immensely helpful to readers attempting to understand the implications of the research, education or case study being discussed in a broader context.

Finally, the reviewer should read the review from a third perspective, that of a colleague who wants to improve the quality of the manuscript. The reviewer should pay particular attention to the journal mission and goals and whether this work is appropriate when considering the scope of the journal. The reviewer should provide comments focused on improving the quality of the study/work or the results/conclusions rather than simply indicating the author's work is flawed. A reviewer should provide suggestions and recommendations for revisions, identify additional work needed or necessary for consideration, and/or make clarifications that would enhance the quality of the manuscript. The reviewer should not rewrite or feel obligated to salvage an extremely poorly written manuscript and/or hopelessly flawed research. When such a manuscript is encountered, reviewers should tactfully share their assessment with the author(s) and editor to avoid expenditure of productive time and talent by all parties involved in the publication process. In the more common scenario of reviewing manuscript submissions, the reviewer should provide useful suggestions related to the organization and writing of the manuscript; any needed clarifications or omissions in the methods; the nature and extent of the figures, graphs, or appendices; the appropriateness of any discussion/conclusions; and whether the manuscript requires minor or major revisions, or in some cases, does not merit publication in its current form.

SUGGESTIONS FOR THE WRITTEN REVIEW

After the manuscript is evaluated from the third perspective, the actual written review should be constructed. The review itself should be divided into 2 sections: (1) confidential comments to the editor where the reviewer provides candid comments about specific elements of the manuscript - including whether the manuscript warrants publication as is or requires minor or major revision, and (2) comments to the author that provide both a general overview of the manuscript and specific detailed comments on the manuscript. The general overview should include a statement on the goal and the major findings of the work. This should be followed by a section that provides specific detailed comments on the manuscript, often divided into the major sections of the paper (title, abstract, introduction, methods, results, discussion, conclusions, references, figure legends, figures and tables). It is particularly helpful to the author(s) if the reviewer identifies the specific location (page, paragraph, and sentence) to which his/her comments are referring to in the review. The review should be written in a constructive

and courteous language, using a format that enables the authors to understand the strengths and address limitations of the manuscript. In composing the written review, the reviewer should remember that absence of comments about any section or aspect of the paper (eg, experimental design, statistics, etc) infers correctness.[2] Thus, the reviewer should err on the side of providing more rather than less feedback. Furthermore, even if the reviewer recommends that the manuscript be rejected, he/she can provide the author(s) with encouragement and instructions on how the manuscript could have been better written, how the study could be more appropriately designed and reported, and/or how the material presented could be presented in a more coherent fashion. If the manuscript is a literature review or a summative evaluation of a component of the literature, particular gaps or omissions should be identified in a constructive fashion.

Reviewers should familiarize themselves with the format and submission process used for the review. Increasingly, Internet-based processes are being used to compose and submit reviews, often requiring the reviewer to answer specific questions and either enter their comments directly or upload their review. Finally, as inferred earlier, reviewers should complete peer reviews in a timely manner as requested by the editor and notify the editor or editorial office if unforeseen circumstances arise that will delay submission of the review.

WHY BECOME AN *AJPE* REVIEWER

Reviewers often find that as they invest time assessing and critiquing the work of authors, they improve their own scholarly writing skills. Furthermore, conducting quality reviews is a useful means of extending one's professional reputation, as editors often invite reliable and good reviewers to serve on the journal's editorial advisory board. Finally, a reviewer can take pride in knowing they have contributed to enhancing and improving the literature in their field while aiding author(s) in most effectively presenting their work. Ultimately, peer review is only as valuable as the contributions of individuals who participate in this confidential process to create a "win-win-win" situation.

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